

REMARKS

Reconsideration of the present application is respectfully requested. With entry of the amendments submitted herein, claims 1-38 and 83-85 will be pending, of which claims 1-26 and 83-85 will be under consideration, with claims 27-38 being withdrawn. Claims 39-82, a group including one independent claim (no. 39), are canceled herein. Claims 83-85, each of which is an independent claim, are added in this paper. The fee for the net addition of one independent claim in excess of three is submitted herewith.

The applicants wish to thank the examiner for the recognition that dependent claims 2, 11-13, and 23-35 would be in condition of allowance if rewritten in independent form and included all limitations of intervening dependent claims (if any). Thus, new claim 83 incorporates the limitations of claims 1 and 2; claim 84 incorporates the limitations of claims 1, 3, 4, 9, 11, and claims 11, 12, and 13 (as alternatives); and claim 85 incorporates the limitations of claims 1, 15, 16, 21, and claims 23, 24, and 25 (as alternatives). In view of the examiner's statement that such subject matter is allowable, it is submitted that these claims are deserving of an immediate indication of allowability.

Claims 1, 3-9, 14-21 and 26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Suzuki, et al. (6,514,855) in view of Baklanov, et al. (6,593,251), Matsuki, et al. (6,559,520) and Shioya, et al. (6,852,651). Furthermore, claims 10 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Suzuki, et al. (6,514,855), Baklanov, et al. (6,593,251), Matsuki, et al. (6,559,520) and Shioya, et al. (6,852,651), as applied to claims 1, 3, 4, 9, 15, 16 and 21 above, and further in view of Chung (6,890,869).

We have considered the teachings of the references and the examiner's

reliance on same. Concerning Suzuki, et al. the examiner notes that

“Suzuki, et al. does not teach a silicon dioxide (SiO_2) layer formed on said second SiOCH layer, wherein said second SiOCH layer includes a hydrogen (H) density lower than that of said first SiOCH layer, and an oxygen (O) density higher than that of said first SiOCH layer.”

Also, it is our observation that Suzuki, et al. teaches that a hydrocarbon cover layer is applied over the second SiOCH layer as an insulating film. See col. 5, lines 27-29. Thus, it appears that Suzuki, et al. teaches away from the present invention in that it discloses a 2d SiOCH layer with different element concentrations and a different insulating layer when compared to the present invention.

The secondary references (Baklanov, et al., Matsuki, et al., and Shioya, et al.), in our view, do not disclose or suggest the specific density relationships of H and O between the first and second SiOCH layers as presently claimed herein. Baklanov, et al. may discuss concentration relationships of Si to O to C and Si to F, but it does not disclose differences in concentration for a given element from layer to layer, and is silent as to H concentration. Matsuki, et al. discloses a siloxane polymer formed by vaporizing a silicon-containing hydrocarbon according to a specific formula (see col. 2, lines 28-29) via CVD. There is no disclosure that the O, C, and H densities can be varied in first and second layers, let alone in these disclosures of first and second layers.

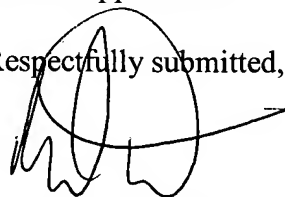
Shioya is cited to supply the teaching missing from the other cited references – the employment of an SiO_2 insulating layer over an SiOCH layer.

Upon review of the reference and their teachings, the applicants are of the view that the combined teachings fail to render claim 1 (and the claims which depend from it) unpatentable under §103(a). First of all, the combined teachings lack one element of the claim – that the hydrogen density of the second SiOCH layer is lower than that of the

first SiOCH layer. Secondly, there is no disclosure in the secondary references to modify the teachings of the primary reference to develop a second SiOCH layer with a higher O density than in the first layer. There is nothing in the Baklanov, et al. reference that would lead to this modification and the examiner's reliance on same to supply the missing teaching is in our view, an impermissible hindsight reconstruction of the invention. Third, since the primary Suzuki reference teaches a hydrocarbon insulating layer, the examiner must point to the teaching or suggestion that would lead the person of skill in the art to modify Suzuki to employ the Shioya, et al. teaching of an SiO₂ insulating layer. The examiner has not supplied this motivation.

Accordingly, for the reasons set forth above, it is submitted that the claims are in condition of allowance and a relatively early reply would be appreciated.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. Danyko', is written over a circular stamp or seal.

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